

MULTILATERAL BIOMEDICAL DATA SHARING IN THE ONE-YEAR JOINT US-RUSSIAN MISSION ON THE INTERNATIONAL SPACE STATION

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The One Year Mission (1YM) by two astronauts on the International Space Station (ISS), starting in March 2015, offers a unique opportunity to expand multilateral collaboration by sharing data and resources among the partner agencies in preparation for planned space exploration missions beyond low Earth orbit.

Agreements and protocols will be established for the collection, distribution, analysis and reporting of both research and clinical data. Data will be shared between the agencies sponsoring the investigators, and between the research and clinical medicine communities where common interests are identified.

The assignment of only two astronauts, one Russian and the other American, to the 1YM necessitated creativity in bilateral efforts to maximize the biomedical return from the opportunity. Addition of Canadian, European and Japanese investigations make the effort even more integrative. There will be three types of investigations: joint, cross-participation and data-exchange. The joint investigations have US and Russian co-principal investigators, and the data acquired will be their common responsibility. The other two types must develop data sharing agreements and processes specific to their needs.

A multilateral panel of ISS partner space agencies will develop policies for international exchange of scientific information to meet their science objectives and priorities. They will promote archiving of space flight data and will inform each other and the scientific community at large about the results obtained from space life sciences studies.

Integration tasks for the 1YM are based on current experience from the ISS and previous efforts on the Russian space station Mir. Closer coordination between international partners requires more common approaches to remove barriers to multilateral resource utilization on the ISS. Greater integration in implementation should increase utilization efficiency to benefit all participants in spaceflight human research.

This presentation will describe the overarching principles for multilateral data collection, analysis and sharing and for data security for medical and research data shared between ISS partners prior to release in public forums.

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